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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/700,349

11/03/2003

Espen Haugs

MAG-004

5257

22832

7590

02/21/2006

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EXAMINER

MAI, ANH T

ART UNIT

PAPER NUMBER

2832

DATE MAILED: 02/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/700,349

Applicant(s)

HAUGS ET AL.

Examiner

Anh T. Mai

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14,25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14,25 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1-3, 9-10, 12, 14, 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Benford [WO 91/09442].

Benford discloses an end piece [lower part of core 56] for magnetic coupling of core parts to a closed path for magnetic flux, the end piece comprising: a plurality of substantially adjacent, wire-shaped bodies, each wire shape body comprising end surfaces; at least an abutment surface for abutment the end surfaces against the core parts, wherein the abutment surface comprises the end surfaces of wire-shaped bodies [figures 4-7; claim 1; page 16].

With respect to claim 2, Benford discloses the end piece being made of magnetizable material [high permeability magnetic material; claim 6].

With respect to claim 3, Benford discloses the iron is known in the art of magnetic material [page 10, lines 14-16].

With respect to claim 10, Benford discloses sheet magnetic material [lamination of iron] on page 10, lines 14-16.

With respect to claim 12, Benford discloses two core parts 62, 64 and two end pieces [figure 8].

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With respect to claim 14, Benford discloses two core parts 62, 64 having rectangular cross sections [figure 8].

3. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benford in view of Buswell [20020008604].

Benford discloses the invention as claimed as cited above except for a portion of end piece is hollow. Herbert discloses magnetic core 41 of a bundle of magnetic wires 44; hollow tubes 43 extending therethrough [figure 6; para 0044]. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have hollow tube as taught by Buswell in the magnetic end piece as disclosed by Benford. The motivation would have been to direct cooling of the magnetic core.

With respect to claims 5, Benford discloses in figure 9 where the flux path is in toroidal shape, it is obviously required an end piece in arc shape, which connects two annular surfaces on the cores [abutment surfaces] and the abutment surfaces are the same area.

4. Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Benford in view of Herbert [6578253].

Benford discloses the invention as claimed as cited above except for the material of the core being sintered material. Herbert discloses magnetic cores as of sintered powdered iron material [col 1, lines 50-54]. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use sintered material as taught by Herbert for the magnetic material as disclosed by Benford. The motivation would have been to use alternate materials that are available to perform the mechanical/electrical requirement for the device. Therefore, it would have been obvious to combine Herbert with Benford.

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5. Claims 6-8, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benford in view of DelVecchio et al. [US 4595843].

Benford discloses the claimed invention as claimed as cited above except for the composite core comprising cylindrical core parts and two end pieces. DelVecchio discloses two cylindrical cores disposed side by side with two end caps 56, 58. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use sintered material as taught by Herbert for the magnetic material as disclosed by Benford. The motivation would have been to provide a variety of magnetic coupling configuration that are available to perform electrical requirement for the device. Therefore, it would have been obvious to combine DelVecchio with Benford.

With respect to claims 7-8, DelVecchio discloses the outer annular surfaces having the same areas as inner annular surfaces as shown in figures 5-6.

With respect to claim 14, Benford discloses in figure 4, the adjacent parts having rectangular cross section.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Benford in view of Ohashi [JP 4-318906].

Benford discloses the claimed invention except for the core having two concentric core parts. Ohashi discloses two toroidal magnetic cores to provide difference in frequency characteristics due to different material [figures 1a-b]. At the time of the invention made, it would have been obvious to a person of ordinary skill in the art to have two concentric core parts as taught by Ohashi to the core parts of Benford for the reason above. Therefore, it would have been obvious to combine Ohashi with Benford.

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7. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Benford in view of Buswell.

Benford discloses an end piece [lower part of core 56] for magnetic coupling of core parts to a closed path for magnetic flux, the end piece comprising: a plurality of substantially adjacent, wire-shaped bodies, each wire shape body comprising end surfaces; an inner annular abutment surface for abutment the end surfaces against the core parts; an outer annular abutment surface for abutment of the end piece against the core parts; the wire shaped bodies form arcs between inner annular abutment surface and outer annular abutment surface [figures 4-9; claim 1; page 16].

Benford discloses the invention as claimed as cited above except for a portion of end piece is hollow. Herbert discloses magnetic core 41 of a bundle of magnetic wires 44; hollow tubes 43 extending therethrough [figure 6; para 0044]. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have hollow tube as taught by Buswell in the magnetic end piece as disclosed by Benford. The motivation would have been to direct cooling of the magnetic core.

Response to Arguments

8. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

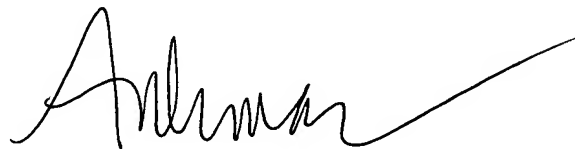
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh T. Mai whose telephone number is 571-272-1995. The examiner can normally be reached on 5/4/9 Schedule.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'Anh Mai', with a long horizontal flourish extending to the right.

**ANH MAI
PRIMARY EXAMINER**